MC3

3 SERIES

3-Series Control System™

- *Next generation control system for multimedia and whole-house control*
- *Core 3 OS™ — Substantially faster and more powerful than other control systems*
- *Exclusive modular programming architecture*
- *Vector floating point coprocessor and 128KB L2 cache*
- *Onboard 256MB RAM & 2GB Flash memory*
- *Expandable storage up to 1TB*
- *Integrated infiNET EX® wireless gateway*
- *Industry-standard Ethernet and Cresnet® wired communications*
- *Supports Crestron® touch screens and other devices*
- *Available RF and IR control options*
- *Onboard e-Control® Web server*
- *Supports Core 3 UI™ XPanel Web-based remote control*
- *Supports Crestron Mobile® control apps for iPhone®, iPad® and Android™*
- *Supports Fusion RV™ remote management*
- *Simplified Web access via myCrestron Dynamic DNS service*
- *WAV, MP3, and WMA audio file playback*
- *Built-in IR, COM, relay, and digital input ports*
- *High-speed USB 2.0 host ports*
- *Installer setup via Crestron Toolbox™ or Internet Explorer®[3]*
- *Backwards compatible to run existing SIMPL programs*
- *Full Unicode (multi-language) support*
- *Increased network throughput and security*
- *IIS v.6.0 Web Server*
- *IPv6 ready*
- *External power supply included*
- *EMerge Alliance® Compatible*

The Crestron® MC3 presents a giant leap forward in control system design. Featuring the all new Core 3™ control engine, the MC3 forms the core of the modern networked home, unleashing more power than ever for integrating home entertainment, AV distribution, security and environmental systems. And, with built-in infiNET EX® wireless technology, native mobile and Web-based control, and onboard media rendering, the MC3 affords vast new, more affordable ways to control everything in the home through a streamlined hardware approach.

Core 3 OS™

Today's commercial buildings and custom homes comprise more technology than ever before, and all these systems need to be networked, managed, and controlled in fundamentally new ways. The IP based Core 3 platform is engineered from the ground up to deliver a network-grade server appliance capable of faithfully handling everything from boardroom AV and custom home theater to total building management.

More than a mere AV controller, the MC3 embodies a distinctively robust, dynamic, and secure platform to elevate your system designs to higher levels of performance and reliability. Compared to other control systems, the MC3 provides a pronounced increase in processing power and speed with more memory, rock solid networking and IP control, and a unique modular programming architecture.

Modular Programming Architecture

Designed for enhanced scalability, the MC3 affords high-speed, real-time multi-tasking to seamlessly run multiple programs simultaneously. This exclusive programming architecture lets programmers independently develop and run device-specific programs for AV, lighting, HVAC, security, etc., allowing for the optimization of each program, and allowing changes to be made to one program without affecting the whole. Even as your system grows, processing resources can easily be shifted from one 3-Series processor to another without rewriting any code. The end benefit is dramatically simplified upgradability with minimal downtime, whether implementing changes on site or remotely via the network.

Robust Ethernet & IP Control

IP technology is the heart of Core 3, so it should be no surprise that its networking abilities are second to none. High-speed Ethernet connectivity enables integration with IP-controllable devices and allows the MC3 to be part of a larger managed control network. Whether residing on a sensitive corporate LAN, a home network, or accessing the Internet through a cable modem, the MC3 provides secure, reliable interconnectivity with touch screens, computers, mobile devices, media servers, video displays, security systems, and other equipment — whether on premises or across the globe.

e-Control® Remote Access

Years ago, Crestron pioneered the world's first IP-based control system unleashing vast new possibilities for controlling, monitoring, and managing integrated systems over a LAN, WAN, and the Internet. Today, our many e-Control solutions offer more ways than ever to control your world the way you want.

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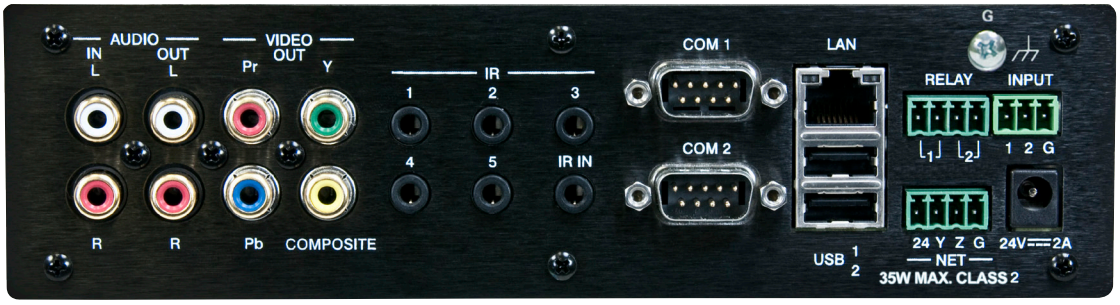

MC3 – Rear View

With e-Control, you can control anything in your home or office from anywhere in the world using a smartphone, tablet, or computer. Built-in Core 3 UI™ XPanel technology affords virtual touch screen control through any popular Web browser running on a laptop or desktop computer. Our Crestron Mobile Pro® app delivers the Crestron touch screen experience to your iPhone®, iPad®, or Android™ device letting you safely monitor and control your entire facility using the one device that goes with you everywhere.

Remote access is simplified using the myCrestron Dynamic DNS service to establish a friendly URL for your home system. And should you ever need technical support, your Crestron system installer can even perform diagnostics and implement updates to the system remotely without coming on site.

Fusion RV™

As part of a complete managed network in a corporate enterprise, college campus, convention center or any other facility, the MC3 works integrally with Crestron Fusion RV Remote Asset Management Software to enable remote scheduling, monitoring, and control from a central help desk.

infiNET EX® Wireless Control

Integrated infiNET EX technology provides an extremely easy and cost-effective way to add control of lighting, temperature, and other functions using Cameo® Wireless Dimmers and Keypads[1], and infiNET EX Thermostats[1]. Adding an infiNET EX remote like the Isys® MTX-3 Handheld Wireless Touch Screen[1] or MLX-3 LCD Handheld Wireless Remote[1] enables sophisticated portable control over everything, whether simply watching TV or adjusting whole-house audio distribution, lighting, and climate control in every room. Perfect for existing structures and rentals, infiNET EX affords ultra-reliable 2-way wireless communications throughout the home without the need for physical control wiring.

Cresnet®

Cresnet provides a dependable network wiring solution for Crestron keypads, lighting controls, thermostats, and other devices that don't require the higher speed of Ethernet. The Cresnet bus offers easy wiring and configuration, carrying bidirectional communication and 24VDC power to each device over a simple 4-conductor cable.

Audio File Playback

Built-in audio signal rendering lets you generate door chimes, phone ringers, and other signals that can be played through the home theater or whole-house audio system. Load your own custom audio files to sound alarms, provide confirmation when you execute a command, deliver helpful voice prompts, or just play welcome music as the home theater system turns on.

Onboard Control Ports

In addition to Ethernet, the MC3 includes two bidirectional RS-232 COM ports and five IR ports to interface directly with all of your centralized AV sources, video displays, and other devices. Two programmable relay ports are included for controlling window shades, a projection screen or lift, or other contact-closure controlled equipment. Two digital inputs are also provided for use with Crestron occupancy sensors, power sensors, door switches, or anything that provides a dry contact closure or low-voltage logic signal.

IR Wireless Option

When equipped with the optional CNXRMIRD IR Receiver[1], the MC3 affords a low-cost IR wireless control solution using any Crestron IR wireless remote or touch screen, such as the TPS-6X[1], or a third-party universal IR remote.

EMerge Alliance® Registered

The MC3 is EMerge Alliance registered and designed to work within a 24 VDC room-level power distribution system. The EMerge Alliance is a non-for-profit open industry association leading the rapid adoption of safe DC power distribution in commercial buildings through the development of Emerge Alliance standards[2]. Crestron is a proud member and supporter of the Alliance. For more information about Crestron Solutions for EMerge Alliance Applications visit: www.crestron.com/emerge.

SPECIFICATIONS

Operating System

Core 3 OS™; real-time, preemptive multi-threaded/multitasking kernel; Transaction-Safe Extended FAT file system; supports up to 10 simultaneously running programs; SIMPL Windows, SIMPL+®, SystemBuilder™, and D3 Pro® programmable

MC3 3-Series Control System™

Memory

SDRAM: 256 MB
Flash: 2 GB
External Storage: up to 1 TB using USB mass storage device (not included)

Wired Communications

Ethernet: 10/100 Mbps; auto-switching; auto-negotiating; auto-discovery; full/half duplex; industry-standard TCP/IP stack; UDP/IP; CIP; DHCP; SSL; IPv4 or IPv6; IIS v.6.0 Web Server; SMTP e-mail client, installer setup via Crestron Toolbox™ or MSIE[2]; supports all e-Control®, Core 3 UI™ XPanel, Crestron Mobile®, Fusion™ and RoomView® applications
Cresnet®: Cresnet master mode
USB: Supports USB HID and USB mass storage class devices via rear panel USB 2.0 host ports, supports computer console via front panel USB 2.0 device port
RS-232: Supports 2-way device control and monitoring up to 115.2k baud with hardware and software handshaking
IR/Serial: Supports 1-way device control via infrared up to 1.2 MHz or serial TTL/RS-232 (0-5 Volts) up to 115.2k baud; supports CNXRMIRD IR Receiver[1]

Wireless Communications

RF Transceiver: infiNET EX® 2-way RF, 2.4 GHz ISM Channels 11-26 (2400 to 2483.5 MHz), default channel 15; IEEE 802.15.4 compliant
Range (typical): 150 ft (46 m) indoor, 250 ft (76 m) outdoor to nearest mesh network device(s); subject to site-specific conditions and individual device capabilities[4]
Device Support: Maximum 100 infiNET EX devices (inclusive of up to 6 MTX-3 and/or MLX-3 remotes) and 5 infiNET EX expanders (model CLW-EXPEX)

Video

(FUTURE)

Audio

Functions: Audio file playback, audio signal pass-thru w/mute during file playback
Audio File Formats: WAV (8 & 16 bit PCM, mono & stereo, 8 – 44.1 kHz sampling rates), MP3, WMA
Input/Output Signal Types: Analog stereo
Analog-To-Digital/Digital-to-Analog Conversion: 24-bit 48 kHz
Performance (pass-thru): Frequency Response: 20Hz to 20kHz ±0.2dB;
S/N Ratio: >93dB, 20Hz to 20kHz A-weighted;
THD+N: <0.01%, 20Hz to 20kHz;
Stereo Separation: >91dB

Connectors

AUDIO IN, L – R: (2) RCA female, unbalanced stereo line-level audio input;
Input Level: 2 Vrms maximum;
Input Impedance: 7k Ohms nominal

AUDIO OUT, L – R: (2) RCA female;
Unbalanced stereo line-level audio output;
Maximum Output Level: 2 Vrms;
Output Impedance: 100 Ohms nominal

VIDEO OUT, Y Pb Pr: (3) RCA female, component (YPbPr) video output (for future use);
Output Level: 1 Vp-p nominal (Y), 0.7 Vp-p nominal (PbPr);
Output Impedance: 75 Ohms nominal

VIDEO OUT, COMPOSITE: (1) RCA female, composite video output (for future use);
Output Level: 1 Vp-p nominal;
Output Impedance: 75 Ohms nominal

IR 1 – 5: (5) 3.5mm mini-phone jacks, IR/Serial output ports;
IR output up to 1.2 MHz;
1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud

IR IN: (1) 3.5mm TRS mini-phone jack;
For connection of the CNXRMIRD IR receiver[1];
Allows IR wireless control from Crestron and third-party remotes using RC-5 IR commands

COM 1 – 2: (2) DB9 male, bidirectional RS-232 ports;
Up to 115.2k baud; hardware and software handshaking support

LAN: (1) 8-wire RJ45 jack; 10Base-T/100Base-TX Ethernet port

USB 1 – 2: (2) USB Type A female;
USB 2.0 ports for storage and mouse/keyboard devices

G: (1) 6-32 screw, chassis ground lug

RELAY 1 – 2: (1) 4-pin 3.5mm detachable terminal block comprising (2) normally open, isolated relays;
Rated 1 Amp, 30 Volts AC/DC;
MOV arc suppression across contacts

INPUT 1 – 2: (1) 3-pin 3.5mm detachable terminal block comprising (2) programmable digital inputs (referenced to GND);
Input Voltage Range: 0-24 Volts DC;
Logic Threshold: ≥1.2 Volts DC active/high, ≤0.46 Volt DC inactive/low;
Input Impedance: 2.2k Ohms pulled up to 5 Volts

NET: (1) 4-pin 3.5mm detachable terminal block, Cresnet master port;
Outputs power to Cresnet devices if a power pack is connected to the 24VDC power input jack;
Receives Cresnet network power if no power pack is connected to the 24VDC power input jack;
See “Power Requirements” for additional specifications

24VDC 2A: (1) 2.1mm barrel DC power jack, 24 Volt DC power input;
PW-2420RU power supply included;
Passes through to NET port to power Cresnet devices;
See “Power Requirements” for additional specifications

COMPUTER (front): (1) USB Type B female;
USB 2.0 computer console port

Antenna (front): (1) Connection for supplied antenna

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Controls & Indicators

PWR: (1) Green LED, indicates operating power supplied from power pack or Cresnet network
NET: (1) Amber LED, indicates communication with the Cresnet system
HW-R: (1) Recessed pushbutton for hardware reset
SW-R: (1) Recessed pushbutton for software reset
ACQUIRE: (1) Recessed pushbutton with red LED, used to set up connections with wireless devices
ACTIVITY: (1) Red LED, indicates wireless communications
LAN (rear): (2) LEDs, green LED indicates Ethernet link status, amber LED indicates Ethernet activity

Power Requirements

Power Pack: 2.0 Amps @ 24 Volts DC;
100-240 Volts AC, 50/60 Hz power pack, model PW-2420RU included

Available Cresnet Power: 35 Watts (1.46 Amps @ 24 Volts DC) when using power pack

Cresnet Power Usage: 9 Watts (0.375 Amps @ 24 Volts DC) when using Cresnet network power

Environmental

Temperature: 41° to 113°F (5° to 45°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: 31 BTU/Hr

Enclosure

Chassis: Aluminum w/polycarbonate label overlay
Faceplate: Plastic w/polycarbonate label overlay
Mounting: Freestanding (adhesive feet included)

Dimensions

Height: 2.30 in (59 mm);
2.25 in (58 mm) without feet
Width: 8.12 in (207 mm)
Depth: 6.74 in (171 mm) including antenna

Weight

2.5 lb (1.2 kg)

MODELS & ACCESSORIES

Available Models

MC3: 3-Series Control System™

Included Accessories

PW-2420RU: Power Pack, Desktop, 24VDC, 2A (50 Watts), Regulated, US/International (Qty. 1 included)

Available Accessories

C2N-HBLOCK: Multi-type Cresnet Distribution Block
CNSP-XX: Custom Serial Interface Cable
STIRP: IR Emitter Probe w/3.5mm Mini Phone Plug
CNXRMIRD: IR Receiver
ANT-EXT-10: 10 ft Antenna Extender
ANT-EXT-5: 5 ft Antenna Extender
CLW-EXPEX-GD-W-T: infiNET EX™ Wireless Expander
CRESTRON-MOBILE-PRO: Crestron Mobile Pro® Control App
SW-FUSION-RV: Fusion RV™ Remote Asset Management Software
SW-ROOMVW-ENT: RoomView® Express - Remote Help Desk and Resource Management Software
CSP-LIR-USB: IR Learner

Notes:

1. Item(s) sold separately.
2. Information regarding the EMerge Alliance can be found at www.emergealliance.org.
3. Web-based installer setup requires the Microsoft® Internet Explorer® Web browser running on a Windows® PC
4. The effective range of the entire wireless network is extended based on the placement and capabilities of each network device. Consult the specifications for each wireless network device to verify wireless capabilities and limitations.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

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The specific patents that cover Crestron products are listed at www.crestronpatents.com.

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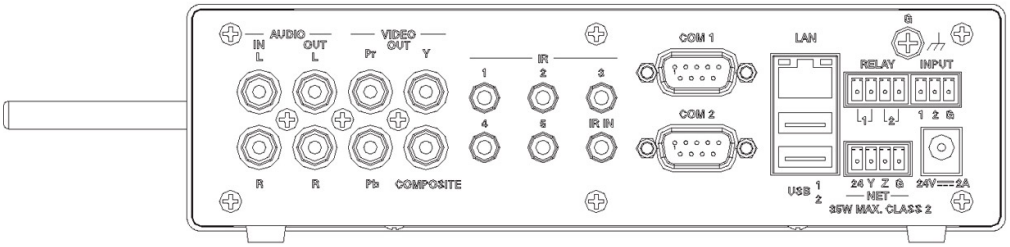

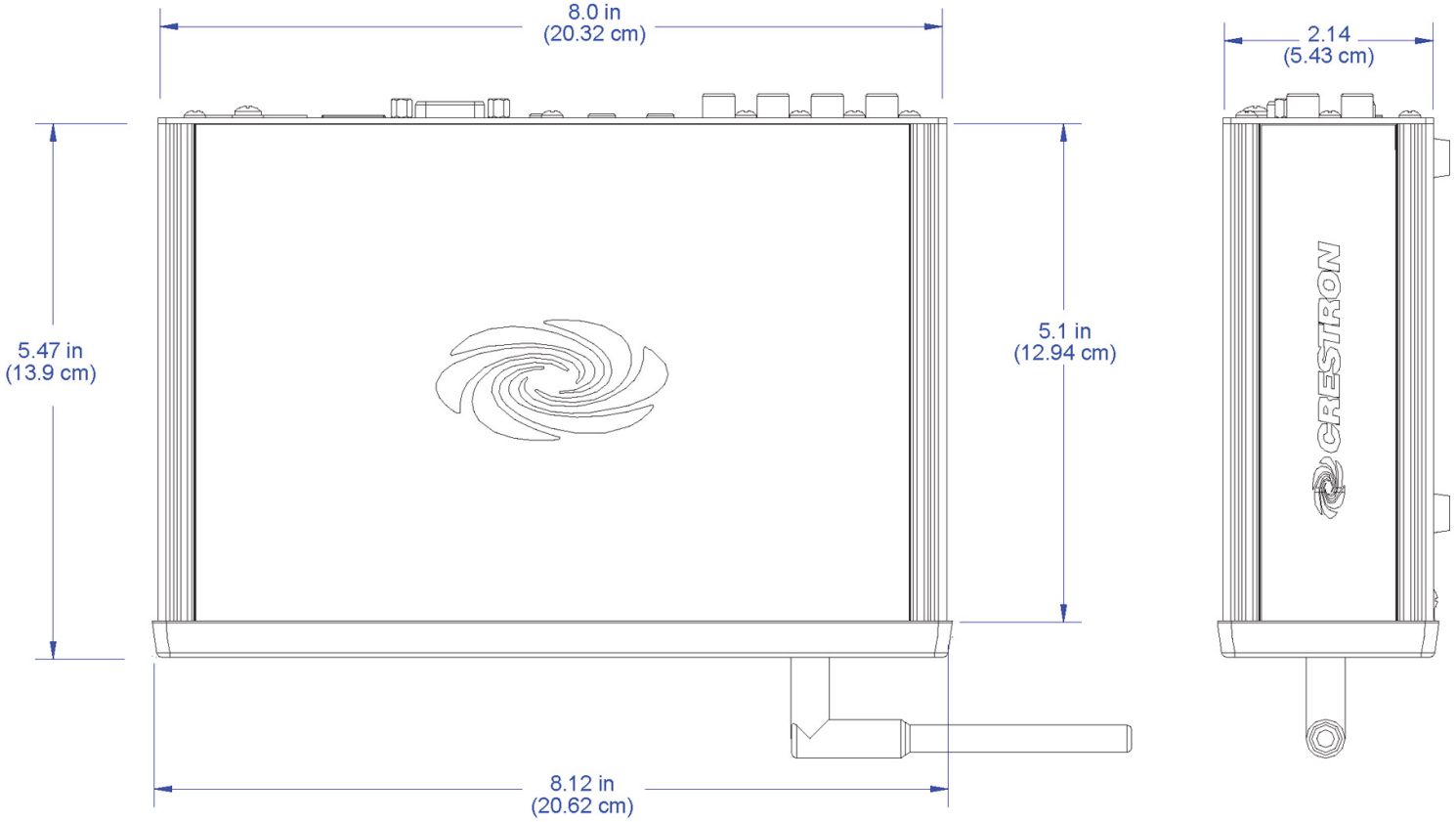

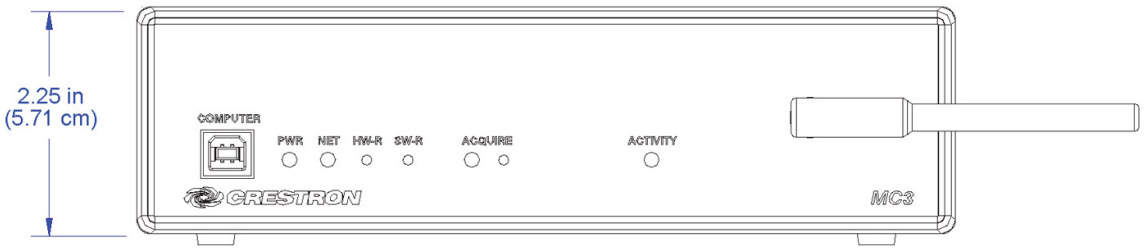

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